

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:

computing a plurality of random excitations based on a plurality of random noise samples;

storing the random excitations;

detecting for a voice activity in a signal; and

encoding the signal to create a non active voice signal if no voice activity is detected including

computing for a frame of the non active voice ~~frame a current~~ signal an
excitation based on a scale factor and one of the random excitations[[;]],

altering the scale factor based on a noise condition of the signal, and

~~re-using the random excitations to compute the current excitations for other~~
~~non active voice frames;~~

computing for another frame of the non active voice signal another excitation
based on the altered scale factor and the random excitations, the another excitation
representative of the noise condition of the signal.

2. (Currently Amended) The method of claim 1 further comprising padding ~~the current~~ an excitation with zeros if a gain of ~~[[the]]~~ a frame of the non active voice ~~[[frame]]~~ signal is zero.

3. (Original) The method of claim 2 further comprising generating random adaptive codebook parameters and fixed codebook parameters.

4. (Currently Amended) The method of claim 3 ~~further comprising~~ wherein computing an excitation for a frame of the non active voice signal includes:

generating a random adaptive excitation based on the random adaptive codebook parameters;

computing a sum of the random adaptive excitation and one of the random excitations; and

rescaling ~~the current excitation with~~ the sum of the random adaptive excitation and one of the random excitations.

5. (Currently Amended) The method of claim 4 ~~further comprising~~ wherein computing an excitation for a frame of the non active voice signal further includes:

computing a fixed codebook gain based on the fixed codebook parameters; and

updating the current excitation with an algebraic-code-excited linear-prediction excitation; ~~and~~

looping for the other non active voice frames.

6. (Original) The method of claim 1 wherein the random noise samples are Gaussian noise samples.

7. (Currently Amended) A storage medium comprising content, which when executed by an accessing machine, causes the accessing machine to implement a method comprising:

computing a plurality of random excitations based on a plurality of random noise samples;

storing the random excitations;

detecting for a voice activity in a signal; and

encoding the signal to create a non active voice signal if no voice activity is detected including

computing for a frame of the non active voice ~~frame a current signal an~~ excitation based on a scale factor and one of the random excitations[[] ; []],

altering the scale factor based on a noise condition of the signal, and

~~re-using the random excitations to compute the current excitations for other non active voice frames;~~

computing for another frame of the non active voice signal another excitation based on the altered scale factor and the random excitations, the another excitation representative of the noise condition of the signal.

8. (Currently Amended) The storage medium of claim 7 comprising content, which when executed by an accessing machine, causes the accessing machine to implement the method further comprising padding ~~the current an~~ excitation with zeros if a gain of ~~[[the]]~~ a frame of the non active voice [[frame]] signal is zero.

9. (Original) The storage medium of claim 8 comprising content, which when executed by an accessing machine, causes the accessing machine to implement the method further comprising generating random adaptive codebook parameters and fixed codebook parameters.

10. (Currently Amended) The storage medium of claim 9 ~~comprising content, which when executed by an accessing machine, causes the accessing machine to implement the method further comprising~~ wherein computing an excitation for a frame of the non active voice signal includes:

generating a random adaptive excitation based on the random adaptive codebook parameters;

computing a sum of the random adaptive excitation and one of the random excitations; and

rescaling ~~the current excitation with~~ the sum of the random adaptive excitation and one of the random excitations.

11. (Currently Amended) The storage medium of claim 10 ~~comprising content, which when executed by an accessing machine, causes the accessing machine to implement the method further comprising~~ wherein computing an excitation for a frame of the non active voice signal further includes:

computing a fixed codebook gain based on the fixed codebook parameters; and
updating the current excitation with an algebraic-code-excited linear-prediction
excitation; ~~and~~
~~looping for the other non active voice frames.~~

12. (Original) The storage medium of claim 7 wherein the random noise samples are Gaussian noise samples.

13. (Currently Amended) An apparatus comprising:

an encoder coupled to a communication channel wherein the encoder is ~~configured to~~ compute ~~a current~~ for a first frame of a non active voice signal an excitation based on a scale factor and one of a plurality of random excitations ~~for a non active voice frame and to re-use the random excitations to compute the current excitations for other non active voice frames~~ the encoder further to compute for a second frame of the non active voice signal another excitation based on the scale factor and the random excitations, where the scale factor has been altered since the computing of the first frame based on a noise condition of the signal, the another excitation representative of the noise condition of the signal;

a voice activity detector coupled to the encoder to detect for a non active voice signal;

a decoder coupled to the communication channel, the decoder further comprising a comfort noise generator to generate comfort noise if the voice activity detector detects the non active voice signal.

14. (Currently Amended) The apparatus of claim 13, the comfort noise generator further configured to pad the current an excitation with zeros if a gain of [[the]] a frame of the non active voice [[frame]] signal is zero.

15. (Original) The apparatus of claim 14, the comfort noise generator further configured to generate random adaptive codebook parameters and fixed codebook parameters.

16. (Currently Amended) The apparatus of claim 15, ~~the comfort noise generator further configured~~ wherein computing an excitation for a frame of the non active voice signal includes:

~~to generate~~ generating a random adaptive excitation based on the random adaptive codebook parameters;

~~to compute~~ computing a sum of the random adaptive excitation and one of the random excitations; and

~~to rescale~~ rescaling ~~the current excitation with~~ the sum of the random adaptive excitation and one of the random excitations.

17. (Currently Amended) The apparatus of claim 16, ~~the comfort noise generator further configured~~ wherein computing an excitation for a frame of the non active voice signal further includes:

~~to compute~~ computing a fixed codebook gain based on the fixed codebook parameters; and

~~to update~~ updating the current excitation with an algebraic-code-excited linear-prediction excitation; ~~and~~

~~to loop for the other non active voice frames.~~

18. (Original) The apparatus of claim 13 wherein the random excitations are based on a plurality of random noise samples.

19. (Original) The apparatus of claim 18 wherein the random noise samples are Gaussian noise samples.

20. (Currently Amended) A storage medium containing content which, when executed by an accessing machine, causes the accessing machine to generate:

an encoder coupled to a communication channel wherein the encoder is ~~configured~~ to compute ~~a current~~ for a first frame of a non active voice signal an excitation based on a scale factor and one of a plurality of random excitations ~~for a non active voice frame and to re-use the random excitations to compute the current excitations for other non active voice frames~~ the encoder further to compute for a second frame of the non active voice signal another excitation based on the scale factor and the random excitations, where the scale factor has been altered since the computing of the first frame based on a noise condition of an audio signal, the another excitation representative of the noise condition of the audio signal;

a voice activity detector coupled to the encoder to detect for the non active voice signal;

a decoder coupled to the communication channel, the decoder further comprising a comfort noise generator to generate comfort noise if the voice activity detector detects the non active voice signal.

21. (Currently Amended) The storage medium of claim 20, the comfort noise generator further configured to pad ~~the current~~ an excitation with zeros if a gain of ~~the~~ a frame of the non active voice frame signal is zero.

22. (Original) The storage medium of claim 21, the comfort noise generator further configured to generate random adaptive codebook parameters and fixed codebook parameters.

23. (Currently Amended) The storage medium of claim 22, ~~the comfort noise generator further configured~~ wherein computing an excitation for a frame of the non active voice signal includes:

~~to generate~~ generating a random adaptive excitation based on the random adaptive codebook parameters;

~~to compute~~ computing a sum of the random adaptive excitation and one of the random excitations; and

~~to rescale~~ rescaling ~~the current excitation with~~ the sum of the random adaptive excitation and one of the random excitations.

24. (Currently Amended) The storage medium of claim 23, ~~the comfort noise generator further configured wherein computing an excitation for a frame of the non active voice signal further includes:~~

~~to compute~~ computing a fixed codebook gain based on the fixed codebook parameters; and

~~to update~~ updating the current excitation with an algebraic-code-excited linear-prediction excitation; ~~and~~

~~to loop for the other non active voice frames.~~

25. (Original) The storage medium of claim 20 wherein the random excitations are based on a plurality of random noise samples.

26. (Original) The storage medium of claim 25 wherein the random noise samples are Gaussian noise samples.

27. (Currently Amended) A method comprising:

encoding a non active voice signal including

computing an ~~current~~ excitation based on a scale factor and one of a plurality of random excitations for a non active voice frame;

altering the scale factor based on a noise condition of an audio signal; and

~~re-using the random excitations to compute the current excitations for other non active voice frames~~

computing for another non active voice frame another excitation based on the altered scale factor and the random excitations, the another excitation representative of the noise condition of the audio signal.

28. (Currently Amended) The method of claim 27 further comprising padding ~~the current~~ an excitation with zeros if a gain of $||$ the $||$ a non active voice frame is zero.

29. (Original) The method of claim 28 further comprising generating random adaptive codebook parameters and fixed codebook parameters.

30. (Currently Amended) The method of claim 29 ~~further comprising~~ wherein computing an excitation for a non active voice frame includes:

generating a random adaptive excitation based on the random adaptive codebook parameters;

computing a sum of the random adaptive excitation and one of the random excitations; and

rescaling ~~the current excitation with~~ the sum of the random adaptive excitation and one of the random excitations.

31. (Currently Amended) The method of claim 30 ~~further comprising~~ wherein computing an excitation for a non active voice frame further includes:

computing a fixed codebook gain based on the fixed codebook parameters; and

updating the current excitation with an algebraic-code-excited linear-prediction excitation; and

~~looping for the other non active voice frames.~~

32. (Original) The method of claim 27 wherein the random excitations are based on a plurality of random noise samples.

33. (Original) The method of claim 32 wherein the random noise samples are Gaussian noise samples.

34. (Currently Amended) An apparatus comprising:

~~an encoder configured to compute a current for a first frame of a non active voice signal an excitation based on a scale factor and one of a plurality of random excitations for a non active voice frame and to re-use the random excitations to compute the current excitations for other non active voice frames;~~ the encoder further to compute for a second frame of the non active voice signal another excitation based on the scale factor and the plurality of random excitations, where the scale factor has been altered since the computing of the first frame based on a noise condition of an audio signal, the another excitation representative of the ambient noise condition of the audio signal.

35. (Currently Amended) The apparatus of claim 34, the encoder further configured to pad the current an excitation with zeros if a gain of [[the]] a frame of the non active voice [[frame]] signal is zero.

36. (Original) The apparatus of claim 35, the encoder further configured to generate random adaptive codebook parameters and fixed codebook parameters.

37. (Currently Amended) The apparatus of claim 36, ~~the encoder further configured wherein computing an excitation for a frame of the non active voice signal includes:~~

~~to generate~~ generating a random adaptive excitation based on the random adaptive codebook parameters;

~~to compute~~ computing a sum of the random adaptive excitation and one of the random excitations; and

~~to rescale~~ rescaling ~~the current excitation with~~ the sum of the random adaptive excitation and one of the random excitations.

38. (Currently Amended) The apparatus of claim 37, ~~the encoder further configured wherein computing an excitation for a frame of the non active voice signal further includes:~~

~~to compute~~ computing a fixed codebook gain based on the fixed codebook parameters; and

~~to update~~ updating the current excitation with an algebraic-code-excited linear-prediction excitation; ~~and~~

~~to loop for the other non active voice frames.~~

39. (Original) The apparatus of claim 34 wherein the random excitations are based on a plurality of random noise samples.

40. (Original) The apparatus of claim 39 wherein the random noise samples are Gaussian noise samples.